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# Department of Defense INSTRUCTION

July 21, 1995  
NUMBER 4100.41

USD(A&T)

SUBJECT: Capabilities-Based Munitions Requirements  
(CBMR) Process

Reference: (a) Secretary of Defense, "Defense Planning  
Guidance (DPG)," current edition

## A. PURPOSE

This Instruction, under reference (a), implements policy, assigns responsibilities, and prescribes procedures for the CBMR process. This process guides the Military Departments in developing munitions procurement requirements as articulated in the DPG.

## B. APPLICABILITY

This Instruction applies to the Office of the Secretary of Defense (OSD), the Military Departments, the Chairman of the Joint Chiefs of Staff, the Unified Combatant Commands, the Defense Agencies, and the DoD Field Activities involved in munitions requirements development, subsequent procurement, and inventory management (hereafter referred to collectively as "the DoD Components").

## C. DEFINITIONS

Terms used in this Instruction are defined in enclosure 1.

## D. POLICY

It is DoD policy under reference (a) that the Military Departments and United States Special Operations Command (USSOCOM), when appropriate, establish munitions requirements to support acquisition programs that arm fielded weapon systems to perform to their designed military capability. These requirements address the operational objectives of the combatant Commander in Chiefs (CINCs) against potential threats, consider logistic capabilities, and retain appropriate capability for residual forces and systems at the conclusion of any future major regional contingency (MRC) and strategic readiness forces. These requirements shall be computed by the Military Departments and USSOCOM using the CBMR process described in this Instruction, and the implementing guidance as stated in the DPG. The major components of the process are shown and described in enclosure 2.

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E. RESPONSIBILITIES

1. The Under Secretary of Defense for Acquisition and Technology shall:

- a. Be the proponent of this Instruction.
- b. Ensure coordination between outyear munitions requirements development and funded weapon systems procurements.
- c. Develop, in conjunction with the Director, Program Analysis and Evaluation, Office of the Comptroller of the Department of Defense, data requirements in the Program Objective Memorandum (POM) Preparation Instructions (PPI) to report and monitor munitions quantities and funding programmed as a result of the CBMR process and to assess imbalances between requirements and funding, if any, during the program review.

2. The Under Secretary of Defense for Policy shall:

- a. Develop written policy guidance on munitions requirements in the DPG.
- b. Publish illustrative planning scenarios (IPS) as part of the DPG to serve as the basis for outyear requirements development.
- c. Specify critical guidelines, such as relevant theaters for consideration and conflict duration, that are necessary inputs into the capabilities-based process, as appropriate.

3. The Under Secretary of Defense (Comptroller)/Chief Financial Officer shall ensure that the Director, Program Analysis and Evaluation, shall:

- a. Use CBMR terminology defined in this Instruction in drafting the PPI, as appropriate.
- b. Review Service munitions programs reported in the POM for compliance with DPG guidance and for consistency with the CBMR process.

4. The Chairman of the Joint Chiefs of Staff shall:

- a. Develop IPS in conjunction with the Under Secretary of Defense for Policy (USD(P)).
- b. Assess the munitions programming requirements developed by the Services and the CINC's combat requirements. To the maximum extent practical, ensure there is compatibility between each effort.

c. Develop the numerical value of the strategic planning factors (SPF) for each theater and provide them to the USD(P).

d. Provide operational planning factors (OPF) as criteria to assist the Services in their selection of munitions requirements methodologies.

5. The Assistant Secretary of Defense for Command, Control, Communications and Intelligence shall ensure that the Director of the Defense Intelligence Agency (DIA) shall:

a. Publish the outyear threat report (OTR) in accordance with the requirements in enclosure 3. The coordinated report must be released by the first of August of every odd-numbered calendar year. This time-line is necessary to support development of the CINCs' threat distribution and to identify requirements for the Services' POM. The time period covered in the OTR must extend to the end of the POM period.

b. Publish an update to the OTR by the first of August of every even-numbered calendar year.

c. Coordinate the report with each Service's intelligence office and with the Combatant Commands to ensure that both quantitative and qualitative aspects of threat doctrine and capabilities for each theater are included that may affect requirements development, and pass these planning considerations to the Services.

6. The Secretaries of the Military Departments shall:

a. Determine munition procurement requirements in accordance with the DPG.

b. Determine the combat requirements by scenario as specified in the DPG. Base calculation of requirements on the CINCs' time-phased threat distribution, using DIA's OTR as the authoritative threat estimate to evaluate wartime consumption. Consider the size of the fielded force, impact of logistics, OPF, and SPF in determining final combat requirements.

c. Determine residual readiness requirement (RRR) to provide a combat capability for all previously committed forces after the DPG-directed scenarios have terminated. It must also be consistent with objectives and policies stated in the DPG. Determination of the RRR should be tied to the development of capability-driven combat requirements that provide operational capability or flexibility, and, whenever possible, should be offset by rounds remaining at the conclusion of the scenarios.

d. Determine the strategic readiness requirement to provide a capability for forces not committed to the DPG-directed scenarios.

e. Aggregate the combat requirements, strategic readiness requirement, and RRR as the war reserve munitions requirements.

f. Determine the training and testing requirement (TTR) for each year in the POM period and/or life cycle, as appropriate.

g. Aggregate war reserve munitions requirements and TTR as the total munitions requirements for the outyears.

h. Select specific methodologies within this capabilities-based framework for weapon systems and platforms to calculate quantitative requirements.

i. When practical, ensure that the Services use common methodologies and values (e.g. probability of kill ( $P_k$ ), probability of munitions effectiveness ( $P_{me}$ ), etc.), when computing requirements for munitions delivered by similar weapon systems and delivery platforms.

j. Ensure that the Services provide the Unified Combatant Commands with munitions procurement requirements computations for the theater once the process is complete.

k. Seek compatibility in the transition between CINCs combat requirement (near term) and Services procurement (mid term).

7. The Commanders of the Unified Combatant Commands shall:

a. For use by the Services and the Chairman of the Joint Chiefs of Staff, develop, publish and distribute by 30 October of every odd-numbered calendar year, a time-phased distribution of the outyear threat among their expected friendly forces consistent with the available planning scenario data.

b. Base this distribution on the CINCs' war fighting concept of operations for the theater considering the tasking of the Joint Strategic Capabilities Plan (JSCP), the DIA's OTR, and DPG's IPSS, etc. The time-phased threat distribution should be based on the CINC's war fighting requirements analysis projected to the last year of the future years development plan. The last year used in this analysis will be identified along with any assumptions used.

c. Identify any additional training requirements during the POM period that will affect the munitions requirements developed by the Services.

d. Identify unique munitions requirements or perspectives to the appropriate Service and to the Chairman of the Joint Chiefs of Staff.

e. Determine the OPF for their theaters that may affect munitions requirements development. Planning factors shall be passed to the Services and Chairman of the Joint Chiefs of Staff for consideration in modeling and requirements development.

f. Coordinate with the DIA to exchange critical qualitative considerations on threat doctrine and capabilities for the theater that may affect requirements development.

g. In conjunction with USD(P) and the Chairman of the Joint Chiefs of Staff, identify post-MRC theater missions and force requirements to the Services for use in developing RRR.

h. Review the Services' requirements for their theaters generated by means of the CBMR. Identify issues to be resolved during the planning and programming process to Chairman of the Joint Chiefs of Staff and Services.

F. PROCEDURES

1. The DIA's OTR shall be the threat estimate for the DPG-specified scenarios used for munitions requirements development.

2. The CINCs threat distribution shall be used by the Services for determining combat requirements.

3. The Military Services shall:

a. Develop combat requirements that consider wartime consumption and the policy to arm committed forces to their design capability. The term "designed military capability" is intended to mean that the fielded force (or fleet) can execute its operational mission as defined by the CINCs with all weapons without undue risk; it is not intended to mean that every system must be filled to design capacity unless warranted by the threat or the nature of the operational requirements.

b. Compute RRR considering specific guidance that may be provided in the DPG. Such guidance should be based on input from the CINCs considering feasible post-MRC missions and operations, or upon a specific capability objective. Once again, the intent is to preserve a designed military capability at the force level, and does not imply that RRR should be based on filling all systems to design capacity, unless warranted by the threat or the nature of the operational requirements. If the combat requirement is based on arming committed forces to their designed military capability (i.e., an increase above expected wartime consumption to preserve operational capability), then the RRR should be offset by the quantity remaining at the conclusion of the scenarios, rather than be totally additive.

c. Determine strategic readiness requirement for forces not committed to the DPG-specified scenarios, whether forward stationed, in the continental United States, or whether Active or

Reserve component. This term also applies to munitions requirements to meet treaty or statutory obligations to allied nations and approved peacetime operational requirements.

d. Develop TTR for each year in the outyear period and then aggregate those requirements, as appropriate, for the POM.

e. Aggregate the combat requirement, the RRR, and the strategic readiness requirement as the war reserve munitions requirement.

4. Combat requirements are primarily regionally focused to complement inventory and stockage policies. The stockage policies are designed to reduce reaction time in a theater and to ensure sustainment of the early deployment of combat forces.

5. The Services will develop TTR for each year in the outyear period and then aggregate those requirements, as appropriate, for the POM.

6. The total munitions requirements is the sum of the war reserve munitions requirements and the aggregated TTR.

G. EFFECTIVE DATE

This Instruction is effective immediately.

*Paul G. Kaminski*

Paul G. Kaminski  
Under Secretary of Defense  
for Acquisition and Technology

Enclosures - 4

1. Definitions
2. The CBMR Process
3. General Information
4. Sample Format for the CINC's Threat Distribution and Operation Plan Phases



### DEFINITIONS

1. Capability. See definition 10., below, military capability.
2. Combat Day of Supply. The total amount of supplies required to support one day of combat, calculated by applying the intensity factor to a standard day of supply.
3. Combat Load (North Atlantic Treaty Organization (NATO)). The total warlike stores carried by an aircraft.
4. Combat Load. The standard quantity and type of munitions carried by a weapons platform and/or its dedicated support vehicle.
5. Concept of the Operation (NATO). Concise statement of the line of action chosen by a commander to accomplish his or her mission.
6. Concept of the Operation. A CINC's description of the desired flow of a campaign plan including theater objectives, major attacks, deception operations, logistics, command and control, and war termination conditions.
7. Days of Supply. A unit or quantity of supplies adopted as a standard of measurement, used in estimating the average daily expenditure under stated conditions. It may also be expressed in terms of a factor; e.g., rounds of ammunition per weapon per day.
8. Expected Daily Consumption. The mean daily consumption per shooter at a given intensity level.
9. Infrastructure. Fixed and permanent installations, fabrications, or facilities for the support and control of military forces.
10. Inventory Objective. The Service stockpile goal for the outyear period that is used to reflect the Services' procurement objectives.
11. Military Capability. The ability to achieve a specified wartime objective (win a war or battle, destroy a target set). It includes force structure, modernization, readiness, and sustainability.
  - a. Designed Military Capability. The ability for all elements and systems of a force to perform their designed roles and functions without unwarranted operational constraint or risk. This definition applies at the force level and is distinct from the design capacity of the systems comprising the force. The munitions required to provide the designed military capability of a force may be greater than or less than the total required to fill the design capacity of its systems, depending on threat, operations, and logistics.



b. Force Structure. Numbers, size, and composition of the units that comprise our Defense forces; e.g., divisions, ships, air wings.

c. Modernization. Technical sophistication of forces, units, weapon systems, and equipment.

d. Readiness. The ability of forces, units, weapons systems, or equipment to deliver the output for which they were designed (includes the ability to deploy and employ without unacceptable delays).

e. Sustainability. The ability to maintain the necessary level and duration of operational activity to achieve military objectives. Sustainability is a function of providing for and maintaining those levels of ready forces, materiel, and consumables necessary to support the military effort.

12. Military Objective. The percentage of the total threat by OTR target category that must be destroyed either to render that threat combat ineffective or to meet guidelines established by either the CINC or National Command Authorities.

13. Modernization. Programmed improvements in the capabilities of forces, particularly equipment, by improving either the  $P_k$ , inherent in a weapon, or the probability of survival of the platform ( $P_s$ ) that launches the weapon. This term also encompasses gains made by leveraging enhancements in logistical effectiveness; i.e., wooden rounds, longer shelf and/or service life, manpower intensity, etc.

14. Munitions. Ammunition or ordnance, including, but not limited to, rockets, missiles, projectiles, and bombs required by a given force structure to neutralize a threat.

a. Level of Effort Munitions. Those items that are stocked on the basis of expected daily expenditure rate, the number of days of combat, and an assumed attrition rate to counter targets, the number of which is unknown, and/or to maintain an anticipated level of combat.

b. Preferred Munitions. Those munitions, whether threat or level of effort that provide the desired  $P_k$  against a given target type, or those that significantly improve the  $P_s$  against the projected threat.

c. Substitute Munitions. Alternative munitions retained in the inventory to make up for insufficient stocks of preferred munitions.

d. Threat-Oriented Munitions. Those which are intended to neutralize a finite assessed threat and for which the total requirement is determined by an agreed upon mathematical model.

15. Operational Planning Factors. Factors that are particular to a specific theater that may affect intratheater distribution of munitions. Examples could be infrastructure development, host-nation support, terrain, weather, or culture.

16. Overlap. The concept of deliberately planning for reasonably duplicating some target coverage to enable the defeat of an unexpected disposition of enemy forces; applicable both between Service components that support a CINC and within those components.

17. Outyear Threat Report (OTR). A collection of quantitative and qualitative assumptions, estimates, and facts about the threat that will face U.S. and allied forces in a given regional conflict during the outyear period. The report presents the DIA's estimate of enemy capabilities in three levels of detail ranging from type and numbers of weapons to an analysis of expected trends in modernization of weaponry and force structure.

18. Procurement Objectives. Quantities of munitions for purchase or acquisition derived by the Services from consideration of both total munitions requirements and projected inventory.

19. Projected Inventory. The Service stockpile of a type of munitions, aggregated over the outyear period, adjusted for anticipated gains and losses.

20. Requirements

a. Combat Requirements. The quantity of munitions required to equip a specified force structure to its designed military capability and to meet CINC requirements for decisive defeat of the enemy. This encompasses rounds needed for operational flexibility during the conflict.

b. Residual Readiness Requirement(RRR). Munitions necessary to provide a post-MRC combat capability for forces committed to the DPG-specified scenarios. If the combat requirement includes munitions needed for operational flexibility and some of these munitions remain at the conclusion of the scenarios, then the RRR should be offset by the amount remaining. Otherwise, the RRR is additive in its entirety.

c. Strategic Readiness Requirement. The quantity of munitions needed to arm forces not committed to support combat operations in the assigned MRC. This term also includes any additional munitions requirements to meet treaty or statutory obligations to allies. It also encompasses peacetime operational requirements in excess of the assigned conflicts' requirements. Other munitions requirements not covered by combat, training and testing requirements (i.e., natural disasters, riot control,

saluting rounds, and Explosive Ordnance Deposition operations) are also included in this category.

d. Total Munitions Requirements. The sum of war reserve munitions requirements, and training and testing requirements.

e. Training and Testing Requirement. Munitions requirements to train the force and to support Service programs that ensure weapons and platforms deliver the intended effectiveness. Surveillance testing of munitions items is accounted for in this block.

f. War Reserve Munitions Requirements. The sum of combat requirements, RRR, and strategic readiness requirements.

21. Residual Forces. The remaining U.S. forces that have an immediate combat potential for continued military operations or that have been deliberately withheld from utilization.

22. Strategic Planning Factors. Factors that are not particular to a specific region that may, however, affect intertheater distribution. Examples could be enroute weather, use of locks and canals, and attrition of shipping.

23. Threat Distribution. The CINC's time-phased assignment of a portion of the enemy's total combat capability (i.e., forces, installations, organizations) to Service component commands. The distribution is a percentage by type of target; e.g., tanks, fighters.

24. War Reserves. Stocks of materiel amassed in peacetime to meet the increase in military requirements consequent upon an outbreak of war. War reserves are intended to provide the interim support essential to sustain operations until re-supply can be effected. (In the MRC context, war reserves are determined to provide sufficient quantities of munitions to defeat the enemy as the conflict will likely terminate before a significant industrial base contribution. However, this does not negate the need to keep a warm industrial base in select munitions lines to fulfill a procurement requirement based on operational necessity.)

## THE CBMR PROCESS

### Fundamental Concepts

1. The DPG directs implementation of this process.
2. The CBMR process allows military planners to base munitions requirements on two concepts:
  - a. A given force structure, armed to its designed military capability; and,
  - b. The estimated quantity of munitions to defeat a specified threat with that force structure.
3. These concepts are consistent with the national military strategy of flexible and selective engagement to protect U.S. interests throughout the world and to help meet the security needs of U.S. partners in key regions. This strategy requires a ready U.S. military force capable of responding quickly and decisively to protect U.S. security. The CBMR process addresses several key issues:
  - a. Involves the CINCs early in the process and ensures operational flexibility in their theater.
  - b. Establishes a common estimate of outyear enemy capabilities.
  - c. Offers a common architecture to describe munitions requirements.
  - d. Recognizes Service-unique perspectives.
  - e. Assists in prioritizing strategic mobility resources.
  - f. Facilitates readiness and sustainability of a decisive force.
  - g. Ensures coordination between CINCs and Services different perspective on requirements.
4. Sections 5 through 28, below, describe the CBMR process in detail. Figure 1, below, is a modified integrated definition model for the blocks to follow in this enclosure.

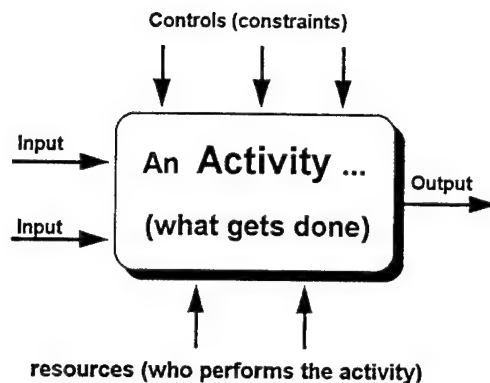


Figure 1. Activity Definition Modeling

5. In Figure 1, above, the block represents an activity that must be performed. Inputs to the activity enter from the left; controls or constraints on the activity enter from the top of the block. The agency that performs or influences the activity is shown below the block while outputs leave the block to the right.

6. The overall CBMR process is described with the nine activity blocks shown in Figure 2, below. Each block is explained separately and in detail in the paragraphs and figures following in this enclosure. Requirements development should not be constrained by anticipated funding constraints.

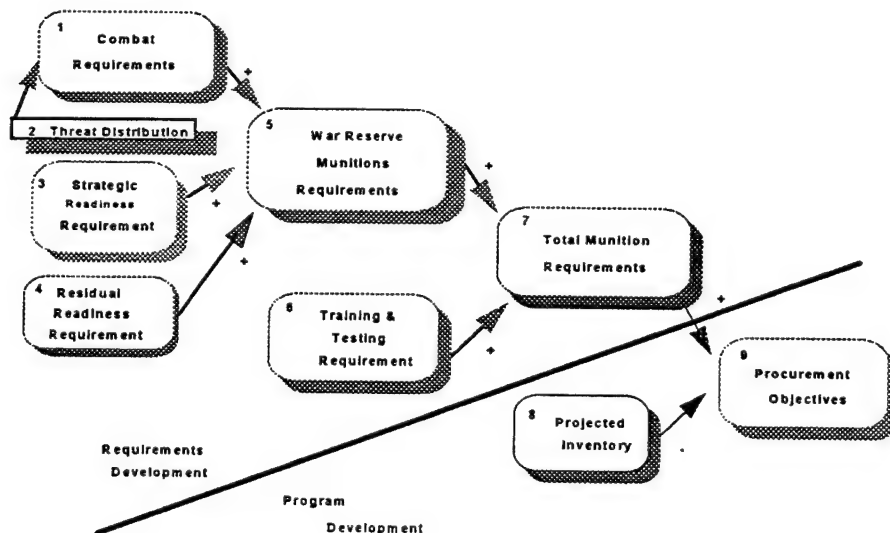


Figure 2. The Capabilities-Based Munitions Requirements Process

7. Numbers are shown in the upper left corner of each block in Figure 2, above, to assist clarity. Blocks 1 through 7 concern requirements development; blocks 8 and 9 link the process to program development.

8. In Block 1 of Figure 2, above, Combat Requirements represents the CINCs' calculation of the munitions required to support a major conflict in a theater. This is past to the Services for consideration in the development of procurement requirements.

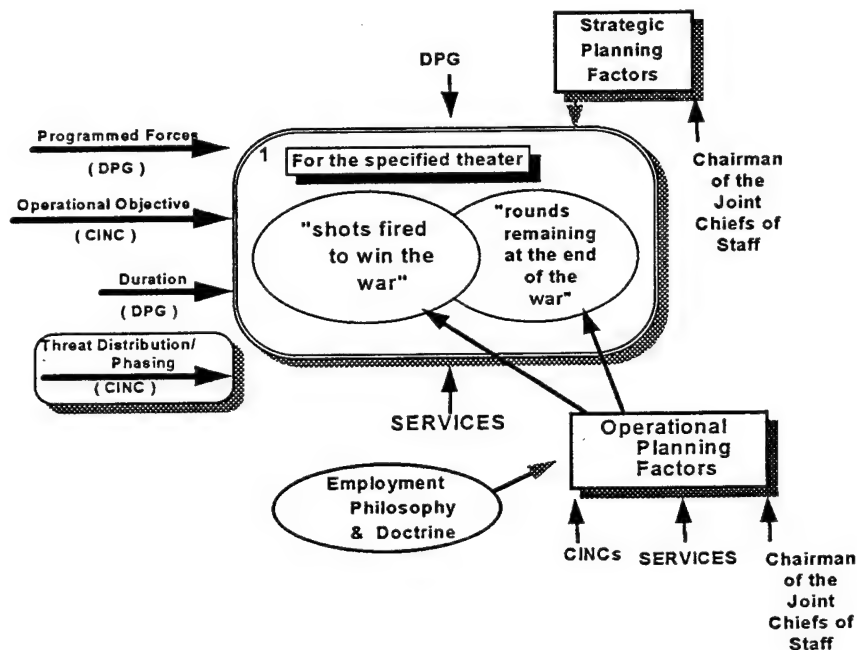


Figure 3. Combat Requirements

9. The Services determine combat requirements based on the inputs shown in Figure 3, above. The two major components are shots fired to win the war and rounds remaining at the end of the war. This is based on the notional allocation specified by the IPS.

10. Munitions requirements in the theater can be determined either by a threat-oriented (combat loads per shooter) or by a level-of-effort (expected daily consumption rates) methodology as indicated in Figure 4, below. Requirements are determined independently for each theater. This is commensurate with war reserve inventory policy and facilitates mobility planning.

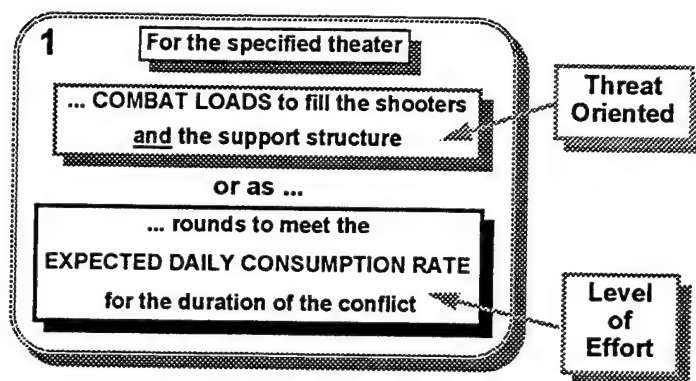


Figure 4. Combat Requirements, Acceptable Units of Measure

11. The Services use the programmed weapon systems modernization in the DPG for munitions calculations. This provision incorporates changes in the force structure to ensure sufficient munitions requirements are identified for each MRC.

12. Conflict duration is specified in the DPG.

13. The CINCs' threat distribution (Block 2, Figure 5, below) assigns a share of the threat target base to each supporting component, allowing for reasonable overlap between Services to ensure operational flexibility. The CINC establishes a threat distribution by applying their war fighting concept of operations, taking into account the JSCP, DIA OTR, IPS force allocation from the DPG, and any known changes to structure or capability of the programmed force.

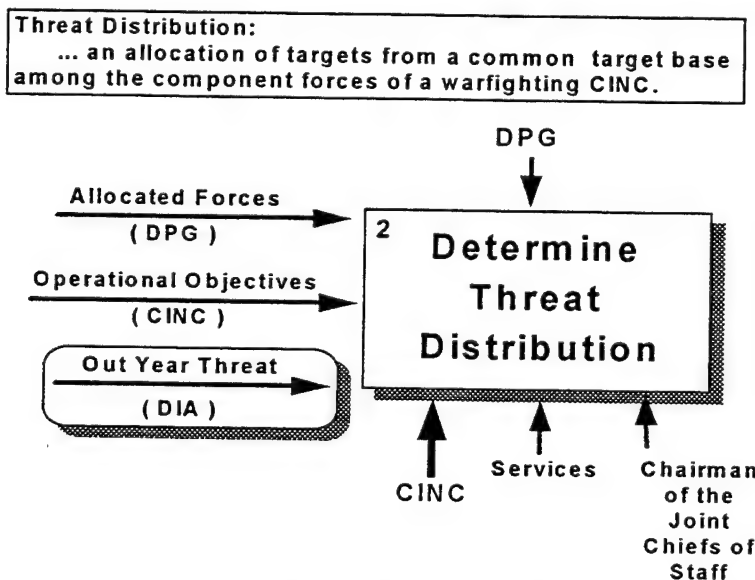


Figure 5. The CINC's Threat Distribution



14. OPF describes the friction and special considerations for a particular theater, such as intra-theater transportation infrastructure. An example would be the need to increase requirements when the undisrupted use of deep water ports cannot be guaranteed during force arrivals and sustainment. OPF are affected by Service doctrine, also called employment philosophy. How forces fight, unilaterally, jointly, or as combined forces, is a primary consideration as the CINC determines operational objectives for the theater.

15. SPF allows joint planners to adjust requirements based on assumptions for inter-theater or strategic transportation. The SPF are applied as a mixed number multiplier to the combat requirements block. The current value of the SPF is 1.0 because we enjoy secure lines of communication. SPF are determined by the Chairman of the Joint Chiefs of Staff in cooperation with United States Transportation Command and the Services.

16. A sample of the threat distribution format, as furnished to the Chairman of the Joint Chiefs of Staff and Services, is shown in enclosure 4.

17. Strategic readiness requirement (Block 3, Figure 6, below) address munitions that are needed for forces that are not apportioned in the IPS. These could be forward deployed, reserve, or other forces available for mobilization. This requirement may not have a regional focus; the OPF and SPF will not necessarily be the same as those used in developing combat requirements.

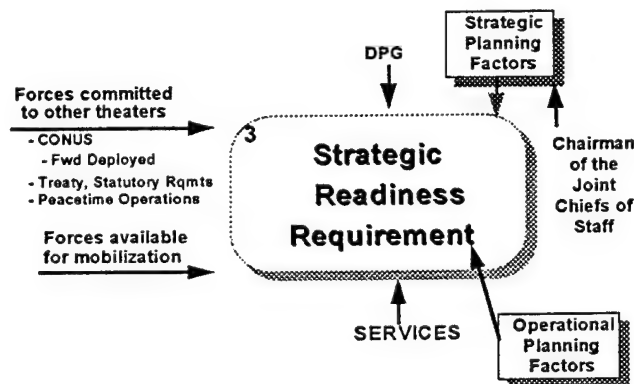


Figure 6. Strategic Readiness Requirement

18. Services compute Residual Readiness Requirement (Block 4, Figure 7, below) to ensure residual forces retain designed capabilities after conflict as directed in the DPG.

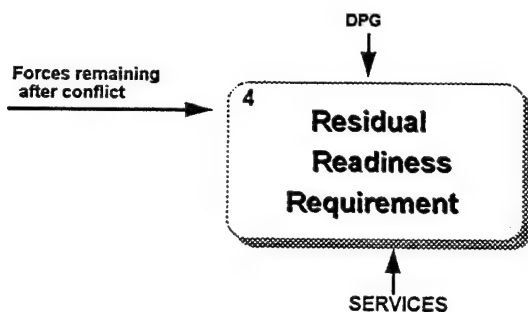


Figure 7. Residual Readiness Requirement

19. War reserve munitions requirements (Block 5, Figure 8, below) are computed using combat requirements, strategic readiness requirements, and RRR. When combat requirements are capability-driven (i.e., to maintain operational flexibility, the combat requirements exceed the expected wartime consumption in the DPG-specified planning scenarios), the rounds remaining at the end of the war will be used as an offset to the RRR.

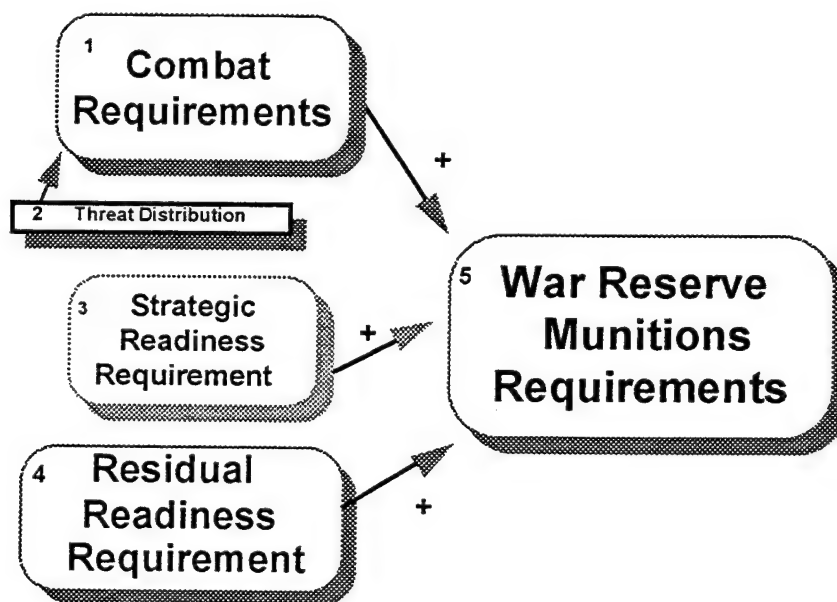


Figure 8. War Reserve Munitions Requirements

20. TTR (Block 6, Figure 9, below) is used by the Services to account for the requirements to support the greatest annual consumption of munitions--training. Annual training requirements are driven by the readiness level desired by the Chief of each Service and can be influenced by additional requirements levied by the supported CINCs. Changes in force

structure, mission, and modernization are the considerations in supporting outyear training. Testing of weapons systems continues after initial development and production for several reasons including shelf life extensions, reliability, maintenance, product improvements, and inventory rotation.

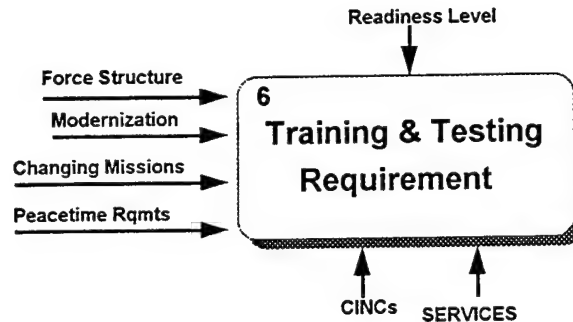


Figure 9. Training and Testing Requirement

21. The total munitions requirements (Block 7, Figure 10, below) is the total of war reserve munitions requirements and TTR (Blocks 5 & 6, Figure 10, below).

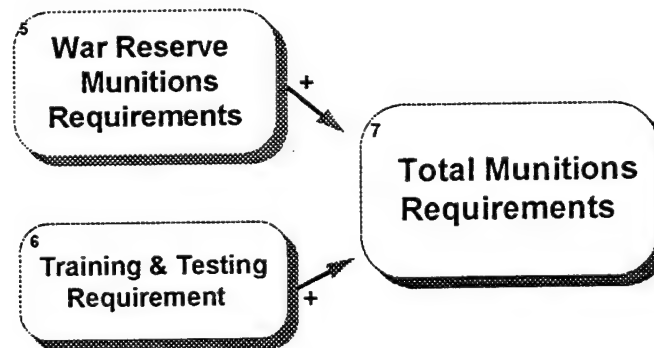


Figure 10. Total Munitions Requirements

22. The linkage between requirements development and program development begins with Figures 11 and 12, below. The requirements process addressed to this point was not constrained by funding limitations. However, program development is constrained by affordability.

23. Determine Projected Inventory (Block 8, Figure 11, below). The Services manage munitions inventories by examining on-hand stockpiles against projected gains and losses. Gains include munitions that are on order or in production for delivery in the current year. Losses include

planned expenditures such as training, testing, and retirement of obsolete weapons. This includes allowances for unplanned expenditures, such as retirement due to lack of reliability found during scheduled testing and military operations other than war, such as forced evacuation of an embassy.

24. Constraints on projected inventories may be the capacity and costs associated with storage and maintenance. Available production capability may also constrain the rate that munitions may be added to the inventory.

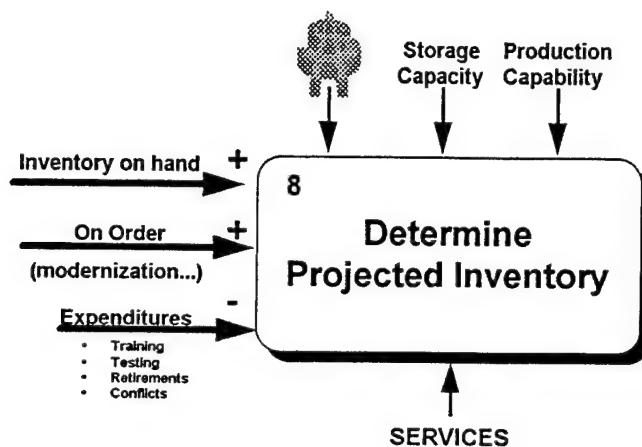


Figure 11. Projected Inventory

25. Determine Procurement Objectives (Block 9, Figure 12, below). This activity consumes extraordinary effort and resources during program development. Services must balance total munitions requirement, projected inventory, and affordability. Host-nation support must also be factored in where known and the applicable parties have committed to it.

26. Constraints to procurement objectives are money and industrial capability. Industrial Capability may be limited by manufacturing technology, capacity, or availability of suppliers for critical components. This is a growing concern with the shrinking of the military industrial base, particularly the second and third tier suppliers of munitions subcomponents.

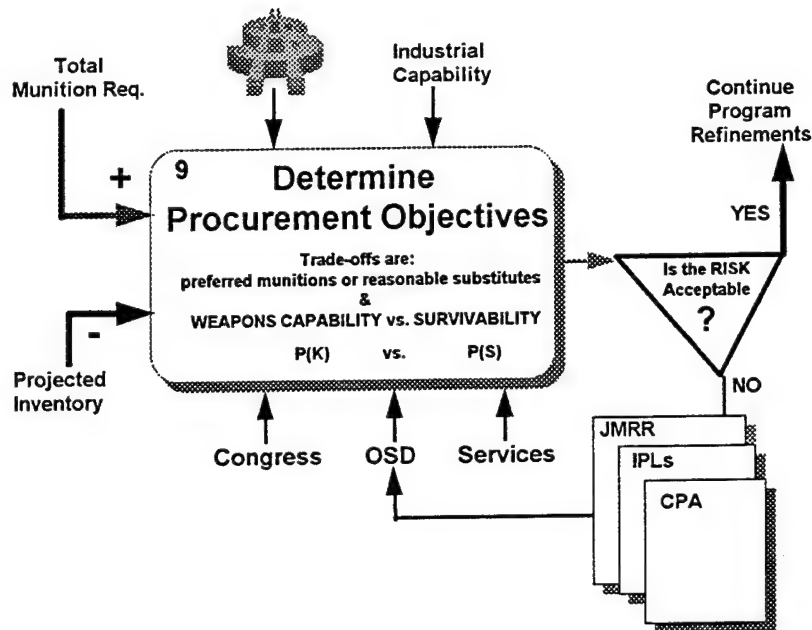


Figure 12. Procurement Objectives

27. Services carefully consider the trade-off in modernizing weapon stockpiles with preferred munitions. The cost of seemingly expensive munitions is mitigated if the operator survives and preserves an increasingly expensive platform.

28. Risk assessment necessarily follows the estimates of affordable procurement objectives. The Joint Military Readiness Review (JMRR) and Integrated Priorities List (IPL) furnish a theater perspective on the desired military capabilities. The Chairman's Program Assessment (CPA) is the view of the Chairman of the Joint Chiefs of Staff on the compliance of the Service programs with the DPG and other strategic issues.

### GENERAL INFORMATION

1. IPS shall be in sufficient detail to facilitate analysis of force closures, theater and strategic mobility, and logistics supportability. Critical elements are the military objectives, friendly and enemy forces, warning times, assumptions used in strategic deployment, and duration of each phase of the contingency.

2. The OTR for each specified region will contain three levels of detail (called tiers) with the enemy targets grouped into five categories.

a. The level of detail contained in the three tiers offers appropriate information for use by individuals ranging from high-level decision-makers to planners and targeting teams.

(1) Tier 1, "By Major Unit," contains the greatest amount of aggregation and, therefore, the lowest resolution of the information. It is intended for senior-level decision-makers who need a strategic level perspective on the enemy forces and capabilities.

(2) Tier 2, "By Target Type," contains the least aggregation and the highest level of detail complete with location of fixed targets. This tier is suitable for target planners and analysts who must determine the appropriate type and number of munitions to destroy the targets.

(3) Tier 3, "Trends and Special Information," presents a conceptual discussion of trends and other facts relevant to that theater. It provides an opportunity for the DIA analysts to express their opinion on dangers and special considerations that are not otherwise obvious in the data presented in the first two tiers, and provides a qualitative assessment of targets. Special information should include:

(a) Ground attrition losses of war reserve materiel due to enemy special forces, aerial attacks, or other enemy initiatives against munitions storage depots and supply lines.

(b) Target regeneration factors that quantify the time needed for the enemy to repair partially destroyed targets and the number of targets which can be repaired. This should account for the enemy's logistics capability and will and/or desire to resist.

b. The categories are as follows:

(1) Maneuver targets are ground-based systems that use maneuver and terrain to increase combat effectiveness, including tanks, personnel carriers, artillery, combat support and service support vehicles, and mobile missile launchers.

(2) Air targets are systems that are attacked while in the air. They may be piloted or unpiloted aircraft, including fighters, bombers, support aircraft, helicopters, surveillance aircraft (manned or unmanned), and missiles in flight.

(3) Maritime targets are vessels that are attacked while in or on the water. This includes major and minor surface combatants, submarines, ships, patrol boats, amphibious vessels, and merchant marine ships.

(4) Infrastructure targets are structures or systems, relatively fixed in location, that support the enemy's theater campaign. These targets may be civilian in nature, such as power and water distribution systems, military only, such as a tank factory, or dual use such as a petroleum refinery. These targets also include fixed installations, equipment manufacturing facilities, power production and distribution systems, road and rail networks, and air and seaports that may support the hostile nation in times of war.

(5) Strategic targets are systems or structures that are key to national command and control, decision-making, or the survival of that nation's leadership. Denying the use of, controlling, or destroying these targets may be a principle criterion for war termination. Strategic targets also include sites that manufacture, store, or launch weapons of mass destruction.

3. Format for the CINC's Threat Distribution should correspond to Tier 2 of the OTR as closely as practical. See enclosure 4.

4. Combat Requirements for each specified MRC:

a. For threat-oriented weapons, although calculation methodology is a Service prerogative, the final requirement should be specified under the CBMR process as combat loads per shooter or as the total number of each weapon required to counter the assigned threat. The number of combat loads should account for both fully armed platforms and appropriate additional combat loads to fill the associated combat service support structure. This ensures sustainability as well as readiness.

b. For level-of-effort weapons, the requirement must be expressed as mean daily consumption rates. The expenditures rates must include a specific duration at that rate (intensity) and be consistent with the concept of operations.

5. Strategic readiness requirements for forces not apportioned to the MRCs may be specified as combat loads per shooter (for a threat-oriented weapon) or as mean daily consumption rate linked to a specified duration (for a level-of-effort weapon). Services may also include peacetime operational requirements, such as explosive ordnance disposal, humanitarian relief, riot control, and operational projects.



6. Services should include and identify a prudent quantity of munitions to ensure that some residual readiness capability remains at conflict termination.

7. Annual requirements for training and testing, aggregated over the POM, should be stated as a total number of rounds by type that are to be consumed annually to correspond to the POM. Account for munitions that are required either for training of the force structure to achieve desired readiness levels or to ensure weapon and platform reliability (testing).

CINC's THREAT DISTRIBUTION													
Postulated Threat for:	MRC	By Service Share and Type Target											
Out years:	1996 - 2001												
Category	Total from DIA Rpt	CINC's Opnl Obj	USA	BW +/-	USN	BW +/-	USAF	BW +/-	USMC Air	BW +/-	USMC GRD	BW +/-	Allied*
*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
MANEUVER		*	Allocates at least 100% of the CINC's Opnl Obj.										
			NOTIONAL DATA										
Tanks	4000	65%	* 50%	5%	21%	3%	33%	5%	15%	3%	15%	3%	* 100%
		2600	* 1300	130	546	78	858	130	195	78	195	78	* 2600
Armored Combat Vehicles	2500	50%	* 50%	5%	20%	3%	40%	5%	15%	3%	15%	3%	* 106%
		1250	* 625	63	250	38	500	63	94	38	94	38	* 1323
Artillery	10500	75%	* 50%	5%	20%	3%	38%	5%	15%	3%	15%	3%	* 104%
		7875	* 3938	394	1575	236	2993	394	601	236	580	236	* 8191
Air Defense Guns	15400	60%	* 40%	5%	20%	3%	42%	5%	15%	3%	15%	3%	* 98%
		9240	* 3696	462	1848	277	3881	462	693	277	693	277	* 9056
S - A Missile TELs	500	300	* 20%	5%	35%	3%	50%	5%	15%	3%	15%	3%	* 101%
			* 60	15	105	9	150	15	25	9	20	9	* 303
Combat Support Vehicles	25000	85%	* 22%	5%	35%	3%	55%	5%	15%	3%	15%	3%	* 108%
		21250	* 4675	1063	7438	638	11688	1063	1594	638	1594	638	* 22949
Total for this classification=	57900		*										
		42515	* 14294		11762		20070		3202		3176		* 44422
													* 73%
													* 42515

\*Level of detail required

CINC's THREAT DISTRIBUTION																		
Postulated Threat for:	MRC			By Service Share and Type Target														
Out years:	1996 - 2001																	
Category	Total from DIA Rpt	CINC's Opnl Obj	*	USA	BW +/-	USN	BW +/-	USAF	BW +/-	USMC Air	BW +/-	USMC GRD	BW +/-	Allied*	BW +/-	*	MIN	Opn Obj
*****	*****	*****	*	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*	*****	*****
AIR	Total from DIA Rpt		*													*		
S-S Missiles - Deployed			*													*		
Bombers			*													*		
Fighters / Interceptors			*													*		
Support Aircraft			*													*		
Helicopters			*													*		
RPV/UAV			*													*		
Transports			*													*		
Total for this classification=			*													*		
			*													*		
MARITIME	Total from DIA Rpt		*													*		
Major Surface Combatants			*													*		
Minor Surface Combatants			*													*		
Amphibious Vessels			*													*		
Support Ships			*													*		
Submarines			*													*		
Cruise Missiles Deployed			*													*		
Cruise Missiles TELS			*													*		
Total for this classification=			*													*		

\*Level of detail required

CINC's THREAT DISTRIBUTION																																	
Postulated Threat for:		MRC		By Service Share and Type Target																													
Out years:		1996 - 2001		CINC's Opnl Obj		USA		BW +/-		USN		BW +/-		USAF		BW +/-		USMC Air		BW +/-		USMC GRD		BW +/-		Allied*		BW +/-		MIN		* Opn Obj	
Category		*****		*****		*****		*****		*****		*****		*****		*****		*****		*****		*****		*****		*****		*****		*****		*****	
INFRASTRUCTURE		Total from DIA Rpt		*		*		*		*		*		*		*		*		*		*		*		*		*		*		*	
Airfields				*		*		*		*		*		*		*		*		*		*		*		*		*		*		*	
Bridges and Tunnels				*		*		*		*		*		*		*		*		*		*		*		*		*		*		*	
Conv. Wpns. Prod. & Storage				*		*		*		*		*		*		*		*		*		*		*		*		*		*		*	
CSS Logistics Bases				*		*		*		*		*		*		*		*		*		*		*		*		*		*		*	
Manufacturing Facilities				*		*		*		*		*		*		*		*		*		*		*		*		*		*		*	
Petroleum Distribution Nodes				*		*		*		*		*		*		*		*		*		*		*		*		*		*		*	
Commercial Port Facilities				*		*		*		*		*		*		*		*		*		*		*		*		*		*		*	
Ship Yards				*		*		*		*		*		*		*		*		*		*		*		*		*		*		*	
Power Production				*		*		*		*		*		*		*		*		*		*		*		*		*		*		*	
Power Distribution				*		*		*		*		*		*		*		*		*		*		*		*		*		*		*	
Rail Networks & Nodes				*		*		*		*		*		*		*		*		*		*		*		*		*		*		*	
Road Choke Points				*		*		*		*		*		*		*		*		*		*		*		*		*		*		*	
Theater Air Defense Sites				*		*		*		*		*		*		*		*		*		*		*		*		*		*		*	
Radar Sites - EW & GCI				*		*		*		*		*		*		*		*		*		*		*		*		*		*		*	
Total for this classification=				*		*		*		*		*		*		*		*		*		*		*		*		*		*		*	

\*Level of detail required

CINC's THREAT DISTRIBUTION																		
Postulated Threat for:		MRC						By Service Share and Type Target										
Out years:		1996 - 2001																
Category	Total from DIA Rpt	CINC's Opnl Obj	*	USA	BW +/-	USN	BW +/-	USAF	BW +/-	USMC Air	BW +/-	USMC GRD	BW +/-	Allied*	BW +/-	*	MIN	Opn Obj
	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
STRATEGIC	Total from DIA Rpt		*							TOTAL BY TYPE		TOTAL BY TYPE				*		
Ballistic Missile Sites			*													*		
Leadership Sites			*													*		
National C3I Nodes			*													*		
WMD Production & Storage			*													*		
Space Launch Facilities			*													*		
Total for this classification=			*													*		
TOTAL OF ALL CLASSIFICATIONS=																		
Note: Numbers are fictitious for illustration only.																		

CINC's Time Phase Threat Distribution

THREAT CATEGORY	OPERATION PLAN Phases <sup>1</sup>				etc.	Total <sup>2</sup>
	I	II	III	IV		
Maneuver						
Air						
Maritime						
Infrastructure						
Strategic						

<sup>1</sup>Equals CINC's Operational Objective

<sup>2</sup># or %